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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,729	02/26/2004	Sumantra Chakravarty	030061 /QUALP825US	6099
70797 7590 02/22/2010 TUROCY & WATSON, LLP 127 Public Square 57th Floor, Key Tower Cleveland, OH 44114			EXAMINER MURPHY, RHONDA L	
			ART UNIT 2462	PAPER NUMBER
			NOTIFICATION DATE 02/22/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/788,729	Applicant(s) CHAKRAVARTY ET AL.	
	Examiner RHONDA MURPHY	Art Unit 2462	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,7,8,13,15,17,18,20-23,25,26 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,7,8,13,15,17,18,20-23,25,26 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to the communication filed on 9/30/09. Accordingly, claims 4-6, 9-12, 14, 16, 19, 24, 27, 28 and 30 have been canceled and claims 1-3, 7, 8, 13, 15, 17, 18, 20-23, 25, 26 and 29 are currently pending.

Response to Arguments

1. Applicant's arguments with respect to claims 1, 8, 15, 17, 18, 20, 21 and 26 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claims 26 and 29 are objected to because of the following informality:
3. In claim 26, line 14, "a long code" should be replaced with "the long code".
4. In claim 29, line 1, Examiner questions whether applicant intended for claim 29 to be dependent upon claim 26.
5. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

Art Unit: 2462

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-3, 7, 8, 13, 15, 17, 18, 2—23, 25, 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shattil (US 7,593,449).

Regarding claims 1, 15, 18, 21 and 29, Shattil teaches a method for reducing cross-polarization interference in a wireless communication system (*Fig. 16*), comprising: generating first data to be transmitted from a first transmission terminal (*col. 22, lines 51-58; further described in col. 44, lines 18-20; multiple transmitters*); encoding the first data with a code at the first terminal to produce a first long encoded signal (*col. 49, lines 51-59: each code symbol may be provided to each of a plurality of transmitters*); applying a first polarization to the first encoded signal to produce a first encoded, polarized signal (*col. 49, lines 60-63*); generating second data to be transmitted from a second transmission terminal (*col. 22, lines 51-58; further described in col. 44, lines 18-20; multiple transmitters*); encoding the second data with the code at the second terminal to produce a second long-encoded signal (*col. 49, lines 51-59: each code symbol may be provided to each of a plurality of transmitters*); applying a second polarization to the second encoded signal to produce a second encoded, polarized signal (*col. 49, lines 60-63*); transmitting the first and second encoded, polarized signals from the first and second transmission terminals, respectively, to at least one

Art Unit: 2462

destination (*col. 30, lines 52-57*). Shattil further teaches a computer readable storage medium executing the above method in *col. 102, lines 35-40*.

In the above embodiment, Shattil fails to explicitly disclose the code as a *long* code. However, in another embodiment, Shattil teaches a long code (*col. 32, lines 4-7*).

In view of this, it would have been obvious to one skilled in the art to include a long code, for use in masking a signal.

Regarding claims 2 and 22, Shattil teaches the method of Claim 1, further comprising: orthogonalizing plural sub-channels of each of the first and second data by applying respective plural mutually distinct Walsh codes in each sub-channel (*col. 32, lines 6-8*).

Regarding claims 3 and 23, Shattil teaches the method of Claim 2, wherein the orthogonalizing step includes: applying different Walsh codes to different respective data originating from different respective users of the communication system (*col. 59, lines 4-9*).

Regarding claims 7 and 25, Shattil teaches the communication method including the transmission method of Claim 1 and further comprising: receiving the first and second long-encoded, polarized signals (*col. 47, lines 11-16*); separating the first long-encoded, polarized signal from the second long-encoded, polarized signal in accordance with their respective polarizations to produce a first long-encoded communication signal and a second long-encoded communication signal (*col. 47, lines 19-26*); applying the long code to the first and second long-encoded communication signals to produce the first and second data (*col. 47, lines 19-26*).

Regarding claims 8, 17, 20 and 26, Shattil teaches a method of demodulating first data transmitted from a first transmission source and second data transmitted by a

Art Unit: 2462

second transmission source (*col. 30, lines 52-59*), the first data transmitted as a first long-encoded, polarized communication signal having a first polarization and the second data transmitted as a second long-encoded, polarized communication signal having a second polarization (*col. 49, lines 51-59: each code symbol may be provided to each of a plurality of transmitters; col. 49, lines 60-63*) the method comprising: receiving the first and second long encoded, polarized communication signals (*col. 47, lines 11-16*); separating the first long-encoded, polarized communication signal from the second long- encoded, polarized communication signal in accordance with their respective polarizations to produce a first long-encoded communication signal and a second long-encoded communication applying a long code to the first and second long-encoded communication signals to produce first and second decoded signals (*col. 47, lines 19-26*); applying a first orthogonal code to the first decoded signal to produce the first data (*col. 50, lines 44-50*); and applying a second orthogonal code to the second decoded signal to produce the second data (*col. 50, lines 44-50*). Shattil further teaches a computer readable storage medium executing the above method in *col. 102, lines 35-40*.

In the above embodiment, Shattil fails to explicitly disclose the code as a *long* code. However, in another embodiment, Shattil teaches a long code (*col. 32, lines 4-7*).

In view of this, it would have been obvious to one skilled in the art to include a long code, for use in masking a signal.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RHONDA MURPHY whose telephone number is (571)272-3185. The examiner can normally be reached on Monday - Friday 9:00 - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2462

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rhonda Murphy
Examiner
Art Unit 2462

/R. M./
Examiner, Art Unit 2462

/Kevin C. Harper/
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